

(c) an isolated nucleic acid molecule that encodes a polypeptide having disintegrin activity and that hybridizes to either strand of a denatured, double-stranded DNA comprising a nucleic acid sequence of (a) under hybridization conditions of 50% formamide and 6XSSC, at 42°C with washing conditions of 68°C, 0.2X SSC, 0.1% SDS; and

(d) an isolated nucleic acid molecule degenerate from SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9 as a result of the genetic code.

13 (amended). An isolated disintegrin polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, and amino acids 389 through 491 of SEQ ID NO:12.

Please add new claims 45-68 as follows:

45 (NEW). The isolated polypeptide of claim 4 further comprising an amino acid sequence selected from the group consisting of amino acids 1 through 15 of SEQ ID NO:12, amino acids 16 through 188 of SEQ ID NO:12, amino acids 189 through 388 of SEQ ID NO:12, amino acids 492 through 675 of SEQ ID NO:12, amino acids 676 through 698 of SEQ ID NO:12, amino acids 699 through 766 of SEQ ID NO:12, amino acids 699 through 787 of SEQ ID NO:13, and amino acids 699 through 820 of SEQ ID NO:14.

46 (NEW). The isolated polypeptide of claim 4 further comprising the amino acid sequence of a polypeptide selected from the group consisting of a poly-His peptide, a FLAG peptide, a peptide linker, a leucine zipper domain, and an Fc polypeptide.

47 (NEW). The isolated polypeptide of claim 4 comprising amino acids 389 through 491 of SEQ ID NO:12.

48 (NEW). The isolated polypeptide of claim 4 comprising SEQ ID NO:12.

49 (NEW). The isolated polypeptide of claim 4 comprising SEQ ID NO:13.

51 (NEW). The isolated disintegrin polypeptide of claim 13 comprising amino acids 389 through 491 of SEQ ID NO:12 and further comprising an amino acid sequence selected from the group consisting of amino acids 1 through 15 of SEQ ID NO:12, amino acids 16 through 188 of SEQ ID NO:12, amino acids 189 through 388 of SEQ ID NO:12, amino acids 492 through 675 of SEQ ID NO:12, amino acids 676 through 698 of SEQ ID NO:12, amino acids 699 through 766 of SEQ ID NO:12, amino acids 699 through 787 of SEQ ID NO:13, and amino acids 699 through 820 of SEQ ID NO:14.

52 (NEW). The isolated disintegrin polypeptide of claim 13 further comprising the amino acid sequence of a polypeptide selected from the group consisting of a poly-His peptide, a FLAG peptide, a peptide linker, a leucine zipper domain, and an Fc polypeptide.

53 (NEW). A polypeptide having disintegrin activity and encoded by a recombinant nucleic acid, wherein the polypeptide is expressed by a method comprising culturing a host cell comprising said recombinant nucleic acid under conditions promoting expression of the polypeptide, and wherein said recombinant nucleic acid comprises a nucleotide sequence encoding the polypeptide and selected from the group consisting of:

- (a) SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9;
- (b) a nucleotide sequence encoding an amino acid sequence comprising a sequence selected from the group consisting of amino acids 389 through 491 of SEQ ID NO:12, SEQ ID NO:12, SEQ ID NO:13, and SEQ ID NO:14;
- (c) a nucleotide sequence that encodes a polypeptide having disintegrin activity and that hybridizes to either strand of a denatured, double-stranded DNA comprising a nucleotide sequence of (a) under hybridization conditions of 50% formamide and 6XSSC, at 42°C with washing conditions of 68°C, 0.2X SSC, 0.1% SDS; and
- (d) a nucleotide sequence degenerate from SEQ ID NO:7, SEQ ID NO:8, and SEQ ID NO:9 as a result of the genetic code.

54 (NEW). The polypeptide of claim 53, wherein the polypeptide is expressed by a method further comprising purifying the expressed polypeptide.

55 (NEW). The polypeptide of claim 53, wherein the polypeptide is expressed by a method comprising culturing a host cell selected from the group consisting of bacterial cells, yeast cells, plant cells, and animal cells.

56 (NEW). The polypeptide of claim 55, wherein the polypeptide is expressed by a method comprising culturing a mammalian host cell.

57 (NEW). The polypeptide of claim 53 having a molecular weight selected from the group consisting of approximately 86,983; 89,459; and 92,781 Daltons as determined by SDS-PAGE.

58 (NEW). The polypeptide of claim 53 in non-glycosylated form.

59 (NEW). The polypeptide of claim 53, wherein the polypeptide further comprises the amino acid sequence of a polypeptide selected from the group consisting of a poly-His peptide, a FLAG peptide, a peptide linker, a leucine zipper domain, and an Fc polypeptide.

60 (NEW). An isolated polypeptide having disintegrin activity and having at least 80% amino acid identity with at least 30 contiguous amino acids of amino acids 389 through 491 of SEQ ID NO:12.

61 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide has at least 90% amino acid identity with at least 30 contiguous amino acids of amino acids 389 through 491 of SEQ ID NO:12.

62 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide has at least 95% amino acid identity with at least 30 contiguous amino acids of amino acids 389 through 491 of SEQ ID NO:12.

63 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide has at least 98% amino acid identity with at least 30 contiguous amino acids of amino acids 389 through 491 of

64 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide comprises at least 20 contiguous amino acids of amino acids 389 through 491 of SEQ ID NO:12.

65 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide comprises at least 30 contiguous amino acids of amino acids 389 through 491 of SEQ ID NO:12.

66 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide further comprises an amino acid sequence selected from the group consisting of amino acids 1 through 15 of SEQ ID NO:12, amino acids 16 through 188 of SEQ ID NO:12, amino acids 189 through 388 of SEQ ID NO:12, amino acids 492 through 675 of SEQ ID NO:12, amino acids 676 through 698 of SEQ ID NO:12, amino acids 699 through 766 of SEQ ID NO:12, amino acids 699 through 787 of SEQ ID NO:13, and amino acids 699 through 820 of SEQ ID NO:14.

67 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide further comprises an amino acid sequence having at least 80% amino acid identity across the length of an amino acid sequence selected from the group consisting of amino acids 1 through 15 of SEQ ID NO:12, amino acids 16 through 188 of SEQ ID NO:12, amino acids 189 through 388 of SEQ ID NO:12, amino acids 492 through 675 of SEQ ID NO:12, amino acids 676 through 698 of SEQ ID NO:12, amino acids 699 through 766 of SEQ ID NO:12, amino acids 699 through 787 of SEQ ID NO:13, and amino acids 699 through 820 of SEQ ID NO:14.

68 (NEW). The isolated polypeptide of claim 60, wherein the polypeptide further comprises the amino acid sequence of a polypeptide selected from the group consisting of a poly-His peptide, a FLAG peptide, a peptide linker, a leucine zipper domain, and an Fc polypeptide.

REMARKS

The title has been amended to better reflect the elected subject matter.

Non-elected claims 1-3, 7-12, and 14-44 have been canceled, claims 4 and 13 have been amended, and claims 45-68 have been added. The amendments to claims 4 and 13 and the addition of new claims does not add new matter: support for the amendments can be found in the

30, line 1 and at page 33, lines 13 through 20; support for claims 46, 52, 59, and 68 can be found at page 26, lines 5 through 11 and at page 29, line 12 through page 33, line 6; and support for